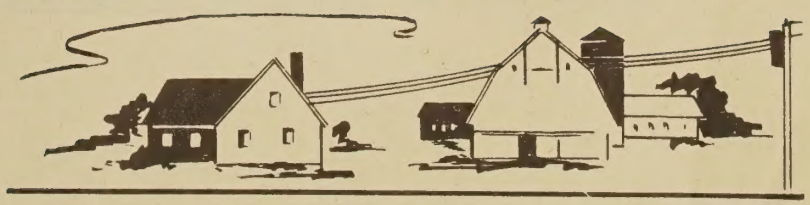
SPECIFICATIONS FOR FARMSTEAD WIRING

(Revised in accordance with 1947 National Electrical Code)



RURAL ELECTRIFICATION ADMINISTRATION • U. S. DEPARTMENT OF AGRICULTURE

SAFE WIRING IS ESSENTIAL

The Rural Electrification Administration has always felt that any consumer's premises should be adequately and safely wired. The specifications and requirements contained on the following pages are issued for distribution to wiremen and others interested in the work of installing wiring and equipment on consumer premises for connection to the borrower's system.

The person who shall determine whether a consumer's premises have been safely wired must be a qualified and recognized inspector. REA will assist borrowers in the planning and establishment of adequate and efficient inspection service for their consumer members.

Borrowers may want to add to these specifications special requirements of the system as well as State Regulations not otherwise covered.

No consumer should be served until the Borrower has been furnished with a certificate of inspection stating that the consumer's premises have been properly wired.

A suggested form of contract has been added following the specifications and drawings. Borrowers may want to print additional copies for use by consumer members when negotiating contracts under the group wiring plan.

SPECIFICATIONS FOR WIRING

All materials used must be of manufacture listed by Underwriters' Laboratories, Incorporated, and shall carry Underwriters' Laboratories' label, or record of approval.

1. GENERAL

These Specifications describe the installation of complete electrical wiring systems on premises adjacent to the rural electric distribution system of the cooperative.

All work must be installed in accordance with the National Electrical Code (regulations of the National Board of Fire Underwriters) and any local or State laws in existence at time of installation.

All work, when started on the premises, shall be completed without delay; and shall be performed to completion in a neat, and careful manner of first-class quality in accordance with accepted modern practice. Care must be exercised in installing materials and equipment not to unnecessarily mar or deface walls, floors, and ceilings. Ordinary repairs such as pointing up around outlets, replacing floors, etc., must be done at the Contractor's expense. No structural members of buildings shall be cut without first obtaining permission of the member.

Wherever wiring cannot be fished through, and it becomes necessary to channel walls or ceilings, the contractor must get the approval of the member and make satisfactory arrangements for repairs. If member desires contractor to make repairs, the cost of same must be stipulated on member's order to the contractor. All unused materials, scraps, and debris must be removed.

2. SCOPE

All work shall be complete in all respects, ready to receive lighting fixtures. Prices given shall include all incidentals, outlet boxes, fixture studs, necessary wire, switches, receptacles, plates, etc., completely installed in place, ready to receive electric current without any additional costs whatsoever.

Every lighting outlet in barns and other outbuildings and residence basements shall be equipped with a non-absorptive, non-metallic lamp holder with shade holder attachment complete in place fastened to outlet box. This lamp holder to be either chain pull or keyless type depending upon whether or not the outlet is switch controlled. If pull chain type is used, an insulating link must be provided in the chain. No other lighting fixtures are to be included.

3. SERVICE ENTRANCES AND METER LOOPS

All farms having more than one major building to be supplied with current should be served through a yard-pole meter loop.

All work shall be done in a thorough and workmanlike manner in accordance with these Specifications and Drawings, and shall be subject to the acceptance of the authorized representative of the cooperative and its members. Deviations from the Specifications and Drawings shall not be permitted except upon the written permission of the authorized representative of the cooperative and its consumer members.

Yard-pole meter loops shall each consist of 4 type "R" or "RH" insulated, stranded conductors and one bare conductor of the same size in rigid steel conduit. The bare neutral shall extend to the proper terminal of the meter socket and breaker equipment. (Grounding of yard-pole meter loops will be installed by others as required in the line construction specifications and drawings.) All conductors of meter loops or service entrances shall extend beyond the service head and be made up with service drop or secondary conductors with drip loop of not less than six (6) inches. If not made up by installer, at least two feet of free conductor shall be left.

All fittings or hardware of ferrous metal shall be well galvanized or otherwise made corrosion resistive. If galvanized they shall be hot dipped in conformity with A.S.T.M. Specification 153-33T.

If the service meter loop is installed on a yard-pole it will include the disconnecting means and over-current protection for the entire farmstead wiring system service. The farmstead wiring contract shall include the cost of and make provision for the connection of the service feeder running from the main distribution branch circuit panel to the main disconnect device in the case of residence meter loop, and to the load side of the meter loop at top of pole in case of yard-pole meter loop. Where the meter loop with circuit breaker protection is installed on a building, no main disconnect switch or over-current protection is necessary at the distribution panel. Where the meter loop is installed on a yard-pole, each building supplied from this meter loop must have its own service entrance and have provisions for a main disconnect and over-current protection as well as branch circuit over-current protection.

Wiring contractors must obtain information from the cooperative superintendent or manager as to which type of main service meter loop has been or will be provided and its location before giving an estimate of cost or starting the wiring installation. He must also install the wiring to suit the type of service meter loop which has been selected. If the wiring contractor installs the wiring in such manner as not to conform with previous arrangements that have been made for main service meter loops, the wiring contractor will be required to make any changes or additions necessary without cost to the owner. Meter loops should be installed as indicated on drawings attached hereto.

(a) Residence Service Entrance

Each residence load center shall be located as near the center of distribution as possible. Wherever the building is to be served by a yard-pole meter loop the service entrance installation shall be made at a location convenient for attachment to such yard-pole meter loops. (See drawing of typical service entrance installation following these specifications.) Where such installation is to be connected to a building service meter loop, the feeder cable from the load center panel shall pass through the building wall and a sealable sill plate at a point convenient for attachment and connection to the main disconnecting device at the meter.

If the building being served is not of sufficient height to allow proper clearance of overhead conductors from the ground, a suitably braced or guyed support shall be erected on the side or end of said building, and entrance cable or conduit with service head run to required height for such clearance. This rule shall be applied to outbuildings as well as the main building being served.

Service entrance wires shall be sized in accordance with the Code to carry the connected load, but in no case shall be smaller than #8 A.W.G. No more than 1 - 15 Amp. and 1 - 20 Amp. branch circuits may be connected to a 2-wire #8 - 30 Amp. 110-volt service entrance equipment. Where the load requires use of a 3-wire service, No. 6 conductors shall be the minimum size.

Service entrance will be complete with ground connection and electrode, service switch and service entrance cable starting inside the building at service switch and extending to outside with approved weatherproof service entrance plate then to point not less than 8 feet above the ground level, terminating at top with approved service head. Contractor will extend each conductor two feet beyond service head for connection to overhead feeders from yard-pole.

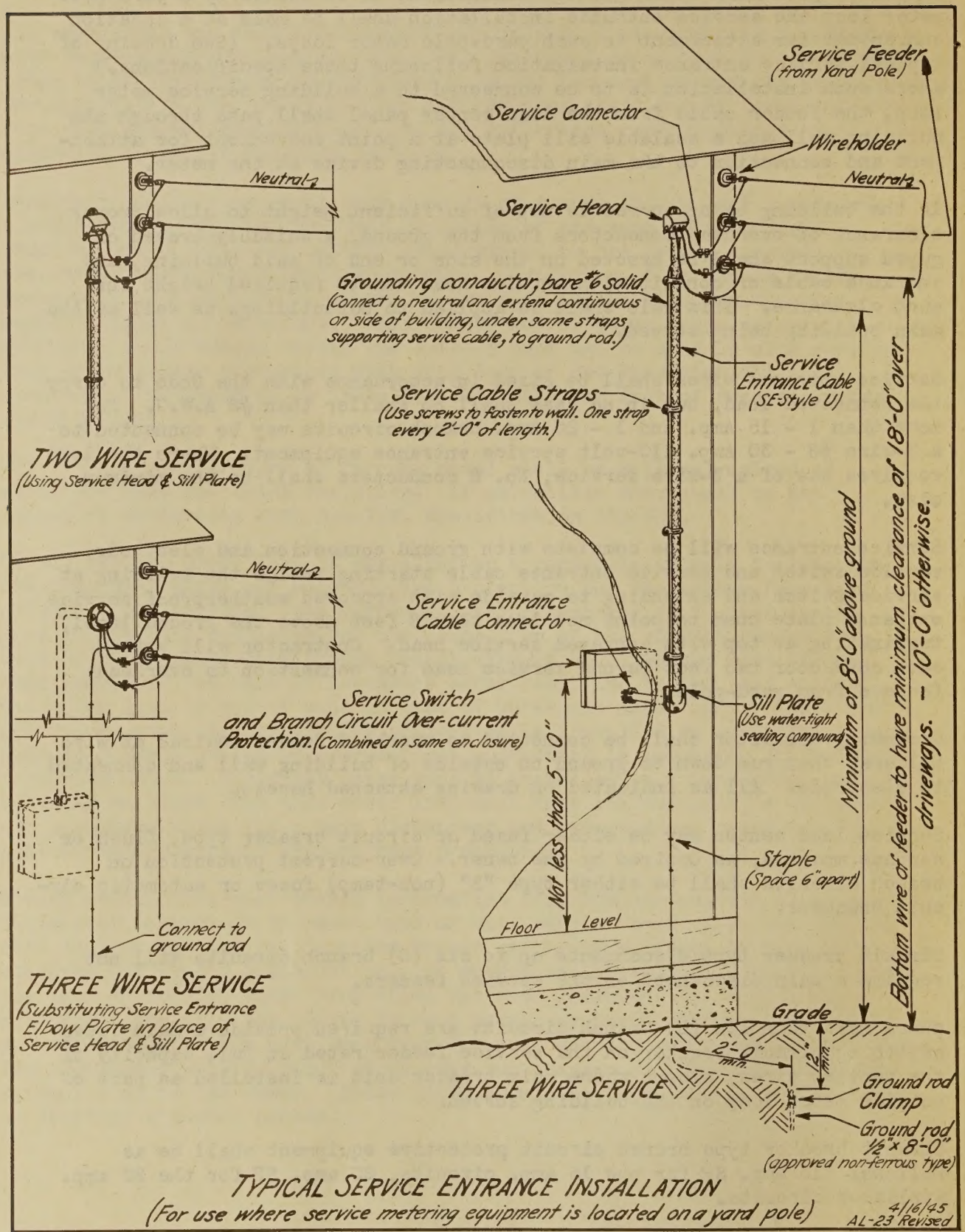
Grounding conductor shall be connected to overhead feeder neutral at wire holders, then run down to ground on outside of building wall and connected to electrode. All as indicated on drawing attached hereto.

Service load center may be either fused or circuit breaker type, flush or surface mounted, as desired by the owner. Over-current protection on branch circuits shall be either type "S" (non-tamp) fuses or automatic circuit breakers.

Circuit breaker type disconnects up to six (6) branch circuits will not require a main disconnect on the service feeders.

Where more than six (6) branch circuits are required provide a main fused switch or circuit breaker on the service feeder rated at full capacity of the service wires, except where main breaker unit is installed as part of outside meter loop on the building served.

Circuit breaker type branch circuit protective equipment shall be as follows: 15 amp. SP for the 15 amp. circuits, 20 amp. SP for the 20 amp. appliance circuits.



TYPICAL SERVICE ENTRANCE INSTALLATION

(For use where service metering equipment is located on a yard pole)

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AL-23 Revised

Fuse type branch circuit protective equipment shall be as follows: 30 amp. SP with 15 amp. Type "S" fuses for the 15 amp. circuits and 20 amp. SP type "S" fuses for the appliance circuits.

Individual circuits required for electric range, water heater or other electrical equipments shall be of adequate conductor size and have over-current protection in the form of fuses or circuit breakers in accordance with the requirements of the National Electrical Code. (Where special rates for water heating are in effect the service rules of the electric distribution cooperative may require special wiring and protective features for the heater.) Not less than No. 6 A.W.G. conductors should be used for the range circuit.

(b) Outbuilding Service Entrance

Outbuilding services 2- #8AWG and larger will be the same as for residence service entrances. Service entrances will be installed exactly as specified for residence service entrance.

Small outbuilding service entrances which are smaller than 2 #8 and on which the over-current protection is located in another building, will include non-metallic sheathed cable starting from a point 5 feet above the floor where distribution center is to be located, extending up on the inside of building to a point not less than 8 feet above the outside ground level, thence to the outside through protecting tube with approved weatherproof wall flange and terminating outside with approved service head. Conductors supplying outbuilding must be connected to approved brackets, insulators and wireholders substantially supported in approved manner to side of building. Service entrance conductors will be connected to overhead feeders by approved solderless connectors with 6 inch drip loop on each conductor.

The drawings, showing the types of construction to be used for the various conditions, are attached separately hereinafter and are part of these specifications.

(c) Alternate: Service Entrances in Conduit

Any of the above service entrances may be installed in rigid conduit or electrical metallic tubing if the member desires. Units listed in schedule, however, are based on using service entrance cable. If services are installed in conduit they shall be complete with service wires, weatherproof service head, bonded connections to switches, grounds, etc., as required by the National Electrical Code.

4. GROUNDING

Each building service shall have separate ground, unless there is not more than one lighting circuit of 35 feet or less, and where no other use of current is made.

Grounding conductors to be not less than #6 copper, connected to overhead neutral at wire holders, and securely fastened every two feet to side of building, through the entire length. Grounding conductors do not have to

be run in conduit, except where they are subject to severe mechanical injury. They may either be run in conduit, or armored #8 ground wire may be used when of adequate conductivity.

Grounding conductor to be connected to electrode by means of approved type brass, bronze or copper clamps. No soldering or copper straps may be used. Approved type cast or malleable iron clamps may be used for connection to galvanized iron or steel electrode when such electrode is permitted.

The Ground electrode shall preferably be an approved, non-ferrous type ground rod. For building services these rods may be 1/2" in diameter. Where Contractors are unable to obtain and install such ground rods, other types of electrodes may be used upon receiving the written consent of the inspector for the Cooperative. All driven electrodes, whether rods or pipes, shall be a minimum of 8' long. Grounding electrodes and connections shall be protected against mechanical injury, and where likely to cause injury to persons or animals, shall be guarded or driven below ground surface.

Grounding conductors may be bonded to well casings or to any underground water piping by means of approved clamps. In no instance shall such local water piping or well casing be depended upon as the sole means of grounding the system.

The exposed non-current carrying metal parts of equipment or frames of electric motors and other appliances shall be grounded when installed in such location that persons or animals might come in contact with them while standing on or within reach of the ground or grounded metal surfaces. The grounding conductor shall also be bonded to the grounded service neutral at the service entrance to the building. Such bonding conductor may be installed as one conductor of a cable or conduit assembly, or as a separate bonding conductor, Grounding and bonding conductors shall be of copper or other metal of similar conductivity, and shall be identified as required in Code Section 2557-(a), (b).

5. INTERIOR AND OUTSIDE WIRING

Each residence shall have the minimum number of branch circuits as required by the National Electrical Code, as designated below: There shall be a minimum of 1 - 15 amp. and 1 - 20 amp. branch circuit in any residence.

The total number of light and receptacle outlets installed (not including the special appliance receptacles hereinafter referred to) are to be evenly distributed on the 15 amp. branch circuits.

In addition to the above where range, water heater, water pump or oil burner outlets are required, separate circuits of the required size shall be run to each outlet.

Branch circuits to light outlets and convenience outlets, except those on special circuit hereafter noted, to be not less than #14 A.W.G. (No. 12 A.W.G. recommended). Branch circuit to range outlet to be not less than 3 #6 A.W.G. Branch circuit to water heater outlets to be 2 wires of not

less than #12 A.W.G. All receptacles in kitchens, pantries, back porches, laundries, basements and dining rooms shall be connected together on one separate circuit of not less than #12 A.W.G. This is referred to as the special appliance receptacle circuit. No light outlets may be connected to this circuit.

Service entrances must be balanced so that an equal number of circuits are connected to each outside leg and neutral, or to within one circuit either way.

Wire sizes and over-current protective devices to motors shall be in accordance with the provisions of the National Electrical Code.

Outside wire between buildings shall be approved weatherproof wire of sufficient size to carry the connected load, but no smaller than #10 A.W.G. in any case, except service conductors less than 25 feet long serving a single branch circuit within one building. Such conductors shall be not less than #12 A.W.G. On spans greater than 50 feet no wire less than #8 A.W.G. shall be used. Yard light dummies on three-way switch control need not be heavier than #10 and if the distance between supports is 35 feet or less, these dummies may be #12.

Overhead wires between buildings which are a part of a member's wiring system must not be fastened to or supported from any of the cooperative's poles except the yard meter pole. Service drops should be taken off of meter pole from more than three quarter sides of the pole. One side of the pole should be left clear to receive the service drop from the high line. Additional poles needed to support member's overhead wires between buildings shall be furnished and installed by the contractor or member.

In addition to the foregoing requirements for wire sizes, the contractor shall make all wire of sufficient size to guarantee that the voltage drop on any light, heat, appliance or convenience outlet is not greater than three percent when the circuit to which they are connected is operating on eighty percent load factor. Outbuilding and interior feeders supplying more than one motor shall be sized in accordance with Section 4314 of the National Electrical Code and in addition shall not have more than five percent drop.

Individual motor branch circuits shall not have more than five percent drop at one hundred and twenty five percent load factor. In figuring voltage drop the distance used shall be from the transformer to the point of use.

To accomplish the above, provide adequate wiring requirements, and to lessen the cost of installation, branch load centers should be provided on upper floors in all houses of more than one story, having more than three rooms on the second floor. Branch load centers should be dead front flush mounted, with over-current protective devices on all branch circuits. Feeder to branch load centers shall be not less than #10 A.W.G. without over-current protection at main distribution cabinet if the length of the run is less than 25 feet.

Recognizing the difference in electrical requirements of people living in rural communities and those living in cities, Section 2110, Article 210 of

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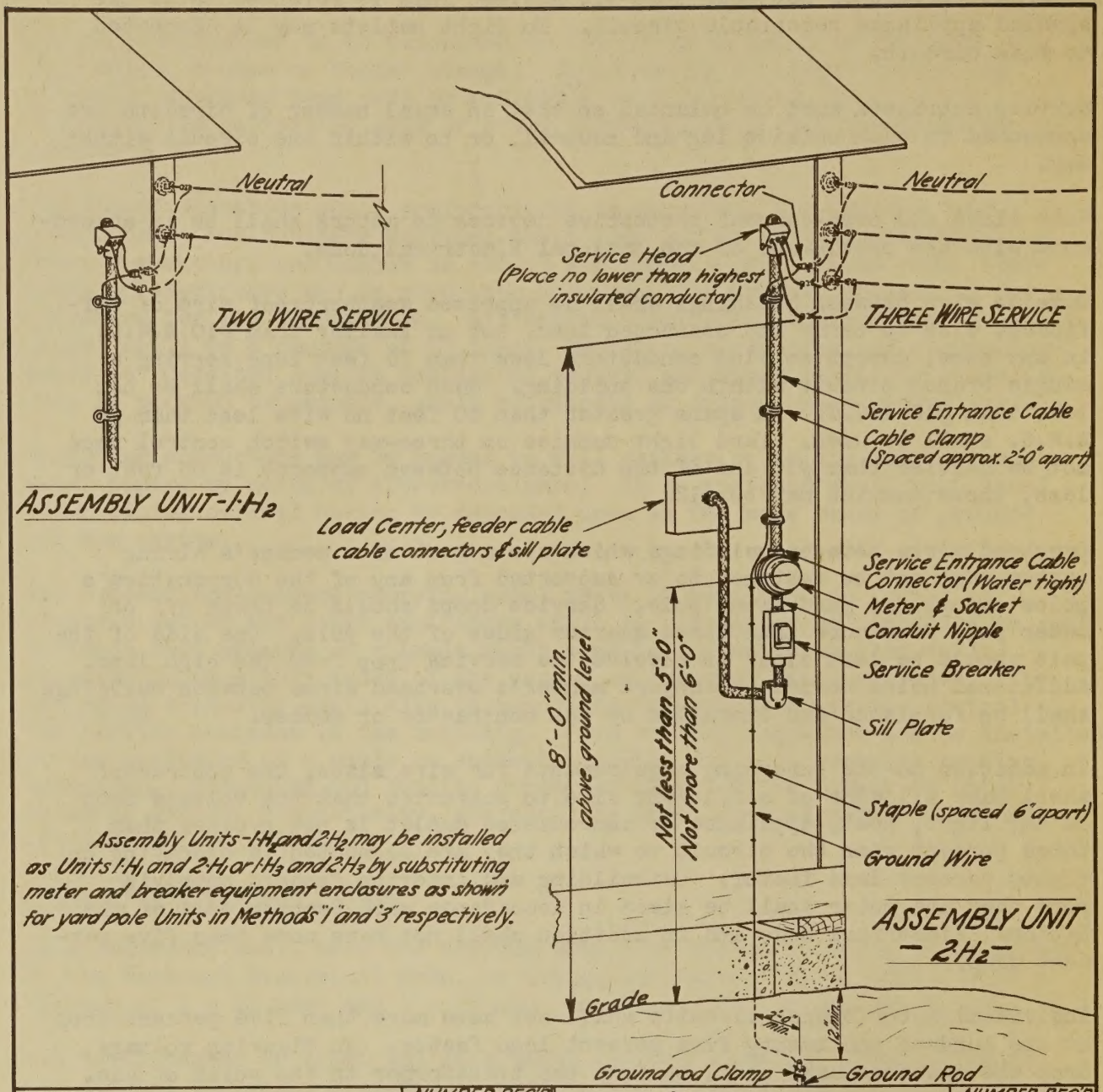


Assembly Units-1-H_2 and 2-H_2 may be installed as Units 1-H_1 and 2-H_1 or 1-H_3 and 2-H_3 by substituting meter and breaker equipment enclosures as shown for yard pole Units in Methods "1" and "3" respectively.

MATERIAL	NUMBER REQ'D Unit 1-H_2	NUMBER REQ'D Unit 2-H_2	MATERIAL	NUMBER REQ'D Unit 1-H_2	NUMBER REQ'D Unit 2-H_2
Cable, Service Entrance	as req'd.	as req'd	Connector	1	1
Clamp, cable with screws	as req'd.	as req'd.	Service Head	1	1
Conduit Nipple, 3"	1	1	Ground Wire, with staples	as req'd.	as req'd.
Connector, S.E. cable, water tight	2	2	Ground Rod, ½" × 8'-0"	1	1
Connector, S.E. cable, plain	1	1	Clamp, ground rod	1	1
Load Center	as req'd.	as req'd.			

SERVICE ENTRANCE INSTALLATION (RESIDENCE)

Scale: None | Date: June 22, 1943

the 1940 National Electrical Code is waived when found necessary. The demands of each installation shall be the basis for determining the number of such outlets. However, it is recommended that the following number of receptacle outlets in addition to the light outlets be the minimum for all wiring installations so that the wiring will be fairly adequate to provide economical and safe operation and provide for future uses of electricity.

In every finished or occupied room of a dwelling there should be at least one outlet for electric lighting, and in every kitchen, dining room, breakfast room, living room, parlor, library, den and sun room there should be installed at least two convenience receptacle outlets and in rooms consistently used as bedrooms there should be installed at least one convenience receptacle outlet. At least one receptacle outlet should be installed adjacent to each permanently installed laundry tub or set of such tubs.

6. DESCRIPTION OF WIRING MATERIALS

Service entrance cable to be SE Style U, unless subject to severe mechanical injury, in which case A.S.E. cable shall be used.

All snap switches shall be tumbler or toggle type with double wipe contacts and shall be of non-competitive grade. Snap switches controlling lighting loads shall also have "T" rating. Switches controlling gas tube lamps shall have a current rating not less than twice that of the lamps they control.

All convenience receptacles shall be duplex type medium range, non-competitive grade and shall have strong double wipe contacts.

All switch and receptacle plates should be, and in bathrooms, kitchens, basements and outbuildings shall be of non-metallic material. Range receptacles shall be 250 volt, 50 amp. polarized type of approved manufacture.

Portable motor outlets exposed to the weather shall be complete with approved weatherproof receptacles, 250 volt.

Stationary motor and pump outlets shall terminate in approved motor disconnect safety switch.

Outlet boxes or surface fittings used in connection with concealed knob and tube work, open work on insulators or non-metallic sheathed cable installations should be of non-metallic material as recommended in Section 3703 of the 1947 edition of the National Electrical Code. Outlet and switch boxes used with such wiring methods in locations where liable to contact by persons or animals while standing on the ground or otherwise in contact with grounded surfaces shall be of non-metallic material, except that metal boxes may be used when grounded as required in Section 4, Page 7. Outlet boxes used with metal enclosed wiring system, such as conduit, armored cable and electrical metallic tubing shall be of sherardized or galvanized steel.

The neutral wire of each branch circuit or feeder shall be identified throughout entire length as required by the Code by having white or gray covering over the insulation. This neutral shall be connected to the identified terminals of all devices, fixtures, etc.

The branch circuit shall have individual neutral wire. Common neutral for multiple final branch circuits is not permitted.

All convenience receptacles in outbuildings shall be located at least 3 feet above floor level and suitably protected against mechanical damage.

All wiring in outbuildings shall be of a method prescribed in the code for conditions involved such as exposure to moisture, combustible fibre, dust, etc.

Wiring in hay mows shall be run in conduit if necessary for protection against fires or shall be otherwise protected against mechanical injury, or dust accumulation. Likewise, lamps and lamp holders shall be enclosed to guard against the accumulation of dust by suitable globes and such globes protected against mechanical injury by guards where occasion requires.

All wire in residence buildings shall be concealed as far as possible unless the owner desires the wiring installed on the surface of the walls. Wiring in residences may be either non-metallic sheathed cable, knob and tube, armored cable, or conduit. Where impossible to conceal same without channelling walls, and the consumer desires not to have walls channelled, or desires wiring on surface of walls, etc., wire may be run on the surface of walls in approved metal raceway or other materials meeting the requirements of the National Electrical Code, with approved transition connectors.

At all lighting outlets and water heater outlets, loops shall be properly spliced, soldered, and taped, and left ready for fixture or appliance connections.

Yard light shall be complete with bracket having separately bushed holes for conductors, conduit arm, substantial weather-proof keyless lamp receptacle and reflector.

Entire electrical system shall be tested for and left free of all grounds, short circuits, etc., and shall be tested for proper polarity throughout, including each outlet.

7. PERMITS AND INSPECTION

Contractor shall obtain all necessary permits and inspection certificates on his work, and deposit all fees required in connection therewith at the cooperative office. If the electrical installation does not pass inspection, the contractor will be required to make any corrections necessary without additional charge and shall be required to deposit a reinspection fee to obtain final inspection and certificate of approval. Contractors will not be paid more than 80% of the contract price until the installation is inspected and approved.

8. DEFECTIVE WORKMANSHIP AND MATERIALS

The acceptance of any workmanship, materials or equipment shall not preclude the subsequent rejection thereof if such workmanship, materials or

equipment shall be found to be defective or not in compliance with the Specifications after delivery or installation, and any such workmanship, materials or equipment found defective or not in compliance with the Specifications before final acceptance of the work or within one (1) year after completion shall be remedied or replaced, as the case may be, by and at the expense of the Contractor.

9. REVISIONS TO OLD 32-VOLT SYSTEMS

Install new service and ground. Branch-circuit cabinet shall have over-current protection to the hot-line only. Divide circuits to meet the latest Code requirements. Polarize to lighting outlets only with neutral carried to shell of each socket on 110-volt equipment. Switch loops need not be polarized.

Provide boxes for all switches and receptacles. At lighting outlets, where one piece rosettes, not fused are used, see that conductors are protected with approved circular loom from last support and extending to back of rosette. Otherwise a suitable outlet box must be installed. Any weather-proof wire inside buildings must be removed. Remove open-type switches and lampholders with exposed terminals. Existing switch and receptacle plates of metal need not to be replaced with composition plates.

10. FIXTURES AND LAMPHOLDERS

Fixtures, bulbs, and lampholders are not considered a part of these specifications, and the contractor will not be required to supply or install same.

However, the contractor may obtain orders from members for fixture installations to suit the members' requirements. Eighty percent of the cost of these fixtures may be included in the members' financing for house wiring. In case the member desires to have them financed, the contractor must present his member's order to the cooperative for approval before installation. This is necessary to insure the total amount of member's financing if not in excess of the amount allowable under REA terms, and that the fixtures or lampholders are included in the list of inspected electrical equipment of, or bear the label of Underwriters' Laboratories, Inc.

11. INSTRUCTIONS TO WIRING CONTRACTORS

On installations where the cooperative is furnishing the main service meter loop on the residence, and where the residence will be wired before the meter loop has been installed, the wiring contractor must obtain the location of the meter loop from the project superintendent or manager. The wiring contractor will then be required to terminate the service feeders at this location, leaving the ends sufficiently long to connect to meter loop disconnect at a later date.
(See Item 3 Page 4.)
(Note - The 1940 code and subsequent amendments may be used until the 1947 Edition is published.)

CONTRACTOR'S PROPOSAL FOR WIRING INSTALLATION

(1)

To consumers to be served by the rural electric distribution system of _____ (hereinafter called the "Cooperative.")

The undersigned (hereinafter called the "Bidder") hereby proposes to furnish and install electric wiring in the premises of consumers to be served by the Cooperative and to furnish all labor, materials, tools and equipment therefor in accordance with the Standard Rural Electrification Administration Specifications for Wiring at the following unit prices:

INSTALLATION UNITS — APPROVED W. P. SERVICE CABLE

Service Entrances, Main and Outbuilding - 2#8 and Larger
(Performance grade insulation on conductors)

All Service Entrances to be figured from meter loop service disconnect furnished by the Cooperative in cases where the meter loop is installed on the main building. Inside distribution panels need only provide for branch circuit over-current protection. Meter loop contractor installs grounds.

Service entrances to all other buildings shall be complete with service head, ground, main over-current protection and disconnect as required by the National Electrical Code as well as branch circuit over-current protection.

Cable figured on basis of 15 feet standard. Greater or lesser amounts shall be added or deducted for as noted.

		Main				
	A.W.G.	Poles	Blades	Fused	Branch Circuits	Price
2 wire	8	2	1	30 amps	2 fused.....	
2 wire	8		*		2 fused.....	
2 wire	8		**		2 breakers.....	
3 wire	6	3	2	50 amps	4 fused.....	
3 wire	6		*		4 fused.....	
3 wire	6		**		4 breakers.....	
3 wire	6	2	2	50 amps	4 ⌿ R fused.....	
3 wire	6		*		4 ⌿ R fused.....	
3 wire	6		**		4 ⌿ R breakers.....	
3 wire	6	2	2	50 amps	4 ⌿ R - WH fused...	
3 wire	6		*		4 ⌿ R - WH fused...	
3 wire	6		**		4 ⌿ R - WH breakers	

(Fused mains and range circuit in excess of 30 amperes may be of pull-out type in lieu of switch blades and fuses.)
(*) Main disconnect and over-current protection installed at meter.
(**) Same as (*) for house meter loops. When metered on yard-pole this installation limited to six sets of breakers.

Prices increased or reduced for S. E. cable in excess of or less than 15 feet as follows:

No. 8 $ _____per foot
No. 6 $ _____per foot

Outbuilding Services

2 wire No. 10 AWG and smaller, 30 amp. fused - 1 branch circuit.....Each
2 wire No. 10 AWG and smaller, 15 amp. breaker - 1 branch circuit.....Each

Yard Pole Meter Loops in Conduit	House Meter Loops-Cable
5 Wire No. 6 AWG.....	2 Wire No. 8 AWG.....
5 Wire No. 4 AWG.....	3 Wire No. 6 AWG.....
5 Wire No. 2 AWG.....	

(For specifications and drawings see AL-5AR)

House Wiring (Wiring Method_____)

Ceiling and side wall outlets, inside and out.....Each
Switch Outlet, S.P. Switch and flush type switches and plate.....Each
Switch Outlet, 3-way Switch and Plate.....Each
Duplex convenience receptacles and plate.....Each
Electric range outlets with 20' cable (¢ additional per ft. over 20 feet.....Each
Bell transformer and bell.....Each

Hanging lighting fixtures (providing can be hung while contractor is on job).....each.

Outbuilding Wiring (Wiring Method_____)

1. Light Outlets.....Each
2. Surface type switch outlets.....Each
3. Duplex convenience receptacles.....Each
4. Hay mow light (conduit where needed).....Each
5. Yard light and 2 3-way switches.....Each
6. Yard light and S.P. Switch.....Each
7. Water pump outlet.....Each
8. Portable utility motor outlets 1 h. p. 20' cable.....Each
9. Portable utility motor outlets 3 h. p. 20' cable.....Each
10. Portable utility motor outlets 5 h. p. 20' cable.....Each
11. Stationary motor outlets 1 h. p. 20' cable.....Each
12. Stationary motor outlets 3 h. p. 20' cable.....Each
13. Stationary motor outlets 5 h. p. 20' cable.....Each

(Item 4) This light may be installed in a gasketed fitting mounted in the cover of an ordinary outlet box to which a dust-tight globe may be inserted. Where the complete installation is made in such a location as to be subject to mechanical injury, the globe shall also be enclosed in a suitable guard.

(Items 7-8-9-10-11-12 and 13) These shall either be installed with a 3-wire cable, one conductor of which may be identified as the grounding conductor or with a third conductor run outside the cable or conduit assembly as instructed in the last paragraph of specification 4, page 8.
Receptacle outlets installed in damp locations, such as basements, dairy barns, etc., shall be of polarized type, from which the grounding conductor may be bonded to the frame of portable or stationary equipment.

Outside Wiring — Weather-proof Wire

No. 12 W. P. wire in place per ft._____
No. 10 W. P. wire in place per ft._____
No. 8 W. P. wire in place per ft._____
No. 6 W. P. wire in place per ft._____
No. 4 W. P. wire in place per ft._____

Inspection fee in addition to above prices_____
(Such inspection fee shall be deposited at the Cooperative office for payment to the inspector at the time notice is given in writing that the installation is ready for inspection.)

It is agreed that work shall be commenced within ( ) days after the acceptance of this proposal by the consumer and shall be completed within ( ) months thereafter.

Attached hereto and made a part hereof is a statement entitled "Bidder's Qualifications" showing that the undersigned (a) maintains a permanent place of business: (b) has adequate plant equipment to properly and expeditiously perform said contract: (c) has sufficient financial recources to meet all obligations incident to the performance of said contract: and (d) has appropriate experience therefor.
The undersigned hereby represents and warrants that all statements set forth therein are true.

The masculine personal pronoun as used herein may be interpreted as feminine or neuter.

Dated this day of , 194 . (j)

Signature of Bidder_____(k)

By_____(k)

Title of Officer_____(k)

Address of Bidder_____(l)

CONTRACTOR'S PROPOSAL FOR WIRING INSTALLATION

(4)

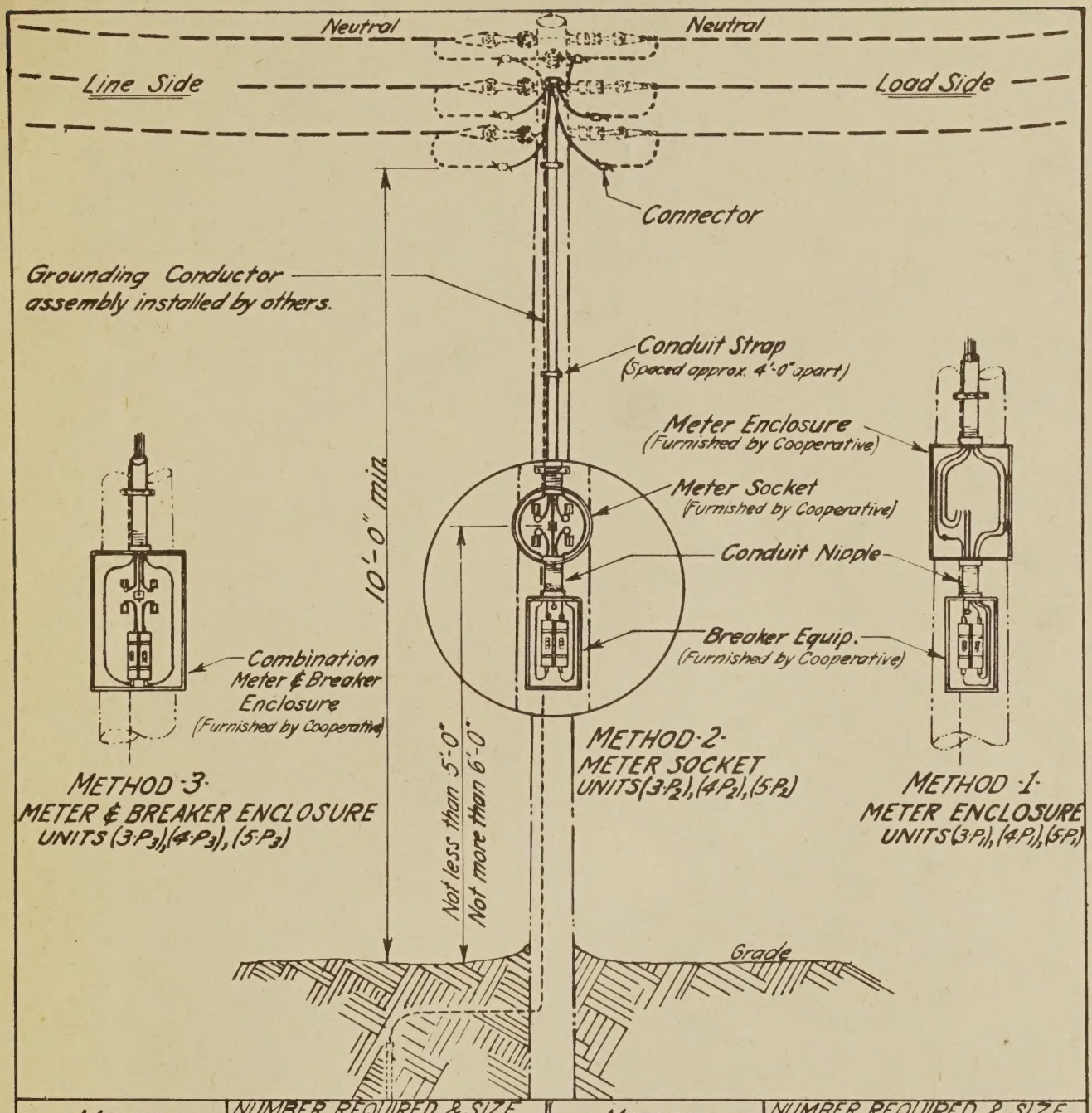
ACCEPTANCE OF PROPOSAL

To _____, _____,
(name of Contractor) (address)

I hereby accept your proposal dated _____ to furnish and install electric wiring in my premises to be served by the rural electric distribution system of _____ for the unit
(name of Cooperative)
prices and on the terms and condition stated therein.

_____
(Consumer)

_____
(Address)



MATERIAL	NUMBER REQUIRED & SIZE								
	3P1	3P2	3P3	4P1	4P2	4P3	5P1	5P2	5P3
Service Head (5-wire)	1-1¼"	1-1¼"	1-1¼"	1-1¼"	1-1¼"	1-1¼"	1-1½"	1-1½"	1-1½"
Connector (solderless)	as required								
Conduit	1-1¼"	1-1¼"	1-1¼"	1-1½"	1-1½"	1-1½"	1-1½"	1-1½"	1-1½"
Strap with screws	as required								

MATERIAL	NUMBER REQUIRED & SIZE								
	3P1	3P2	3P3	4P1	4P2	4P3	5P1	5P2	5P3
Conduit Nipple, 3"	1-1¼"	1-1¼"	1-1¼"	1-1½"	1-1½"	1-1½"	1-1½"	1-1½"	1-1½"
Conductor - RP	4#6	4#6	4#6	4#4	4#4	4#4	4#2	4#2	4#2
Conductor (bare) Neutral	1#6	1#6	1#6	1#6	1#6	1#6	1#6	1#6	1#6

AL-5 Revised

YARD POLE METER INSTALLATION

Scale: None

Date: Apr. 16, 1945

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